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On the Sustainability of Social Security: Have the Faroe Islands Found the Solution?

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Introduction

The United States Social Security program is in a state of disarray, desperately needing a significant change of course in order to meet the future needs of the American people (Status of the Social Security and Medicare Programs). With Social Security actuaries pointing to the year 2034 as the date of OASDI Trust Fund depletion, the clock is ticking on lawmakers to find a solution (Status of the Social Security and Medicare Programs). Consider this quote from the annual trustee's report in 2006:

> Under current law the cost of Social Security will soon begin to increase faster than the program's income, because of the aging of the baby-boom generation, expected continuing low fertility, and increasing life expectancy (Board of Trustees 2006, 16).

Nations around the globe are already implementing Social Insurance reform including Chile, Australia and the Faroe Islands (Social Security Programs Throughout the World). This thesis will analyze the Faroe Islands (Denmark) and its adoption of Nordic social insurance ideals, as well as examine in detail the current laws and regulations that govern the operation of the United States Social Security Administration. In order to gain insight into how the United States might be able to enact its own reform, the United States and the Faroe Islands will be compared side by side.

The Social Security Administration now has decades of social reform precedent from around the world as well as decades of research, statistics, forecasting, and actuarial analysis of the entire U.S. Social Security system (Statistics & Data Files by Release Date, 2019). To conclude, this thesis will cover the main policy areas that lawmakers have focused on in the past, as well as touch on some promising comprehensive strategies that have been introduced recently by prominent lawmakers.

Nordic Social Insurance

In the mid-19th century, the modern Danish Government was formed. When the Danish Constitution was founded, only very few people had access to a pension at all. In fact, it was an unknown concept unless you happened to work as a priest or craftsman. Eventually, the Danish governing officials created pension systems for themselves. These were often limited to only the highest-ranking officials and were never more than a small, age related pension. The rest of the population depended on church, family or aid from the community. Over the next two centuries, the Danish pension system gradually extended to more and more of the Danish population (Scandinavia, 2018).

Denmark has adopted three different types of pensions: Public pensions, private pensions and personal pensions. The public pension is designed to prevent any "pensioner" from living in poverty. The private pension plan is implemented to maintain some reasonable standard of pre-retirement living. The personal plans serve a completely supplemental purpose. It is only rarely that pension plans act in isolation from any other pension or retirement plans. Often, multiple kinds of pension plans will work together in unison to constitute a comprehensive plan (Scandinavia, 2018).

Public Pensions

The Danish equivalent of U.S. Social Security would be the nation's public pension plan. This is a state-sponsored plan funded through some sort of taxation. There are two subcategories within public pension funds in general: "pre-funded" and "pay-as-you-go." The first requires all retirees to save their entire retirement in full before retirement, while the second will use the money that is paid by younger workers during a given month and provide those funds to older workers in the same month (Provisions Affecting Individual Accounts).

Denmark uses a 'pay-as-you-go' system and the current law allows for old-age pensions to be paid out at the age of 65 for both men and women. Every year the retirement age will increase by six months from age 65 to age 67. The change will begin in 2024 and will continue until 2027. The current maximum payout is EUR 9,210 per year.[1] The Danish government also offers different supplementary plans based on income. These include plans to help cover the costs of rent, dentistry, and various other living expenses. Denmark also has a Labor Market Supplementary Pension (abbreviated in Faroese as ATP) which is payable at age 65 (67 in 2027). Participation in this plan is compulsory when employed. ATP benefits will depend on the total contributions throughout one's career. The maximum benefit per year from this plan is EUR 3,350 (Scandinavia, 2018).

Disability

The Danish government also provides income to those who have permanently lost the ability to earn an income. This applies both to sickness and bodily injury. This type of pension provides a maximum payment of EUR 27,520 but has certain limitations regarding income and relationship status. Once the disabled person reaches age 65 (or the current retirement age), the government issues a de facto retirement and the disability pension is replaced with the lesser old-age pension. Denmark allows for early retirement, also known as *efterløn*, if the person who is retiring early has been specifically contributing to an early-retirement plan for at least 30 years

[1] This would be equivalent to $10,404 using an exchange rate of 1.13 on April 17, 2019.

and has been contributing since the age of 30 years at the latest. The benefit is 90% of the previous salary, but no more than EUR 548 weekly (Scandinavia, 2018).

Private Pensions

Private pensions are set up in two different ways: through a union agreement or through an agreement between an individual and a company. All work-related union pensions are compulsory in Denmark, making them more efficient to run. Under normal circumstances, both the employee and the employer contribute to the plan with the employer paying two thirds and the employee paying one third of a fixed percentage of the salary. Individual agreements can be set with different terms. Around 40% of all Danish citizens have some type of private pension through their employer which is over 80% of the nation's employed workers (Scandinavia, 2018).

Types of Private Pensions

Private pensions offer various products including annuity certain contracts and temporary life annuities, life annuities, endowment pensions and old-age savings plans. An annuity certain contract is paid out over anywhere from 10 to 25 years regardless of whether the annuitant outlives the payment or not. Temporary life annuities are similar to annuity certain contracts but can vary from contract to contract. The remaining sum might or might not be paid to the beneficiaries if the annuitant passes before the end of the policy. Life annuities come in two different forms: immediate and deferred. Immediate life annuities are formed when the annuitant surrenders a lump sum and is paid monthly income for the remainder of his or her life. A deferred life annuity has two stages: an accumulation phase and an income phase. During the first phase the annuitant pays the insurance company monthly in order to be paid either as a lump sum or in monthly installments once he or she retires. An endowment pension pays a lump sum at retirement. The Danish government is in the process of phasing out endowment pensions. The old-age savings plan is the Danish replacement for the endowment pension. It is payable as either a lump sum or in payments. The maximum contribution is EUR 3,774 per year. It is not payable until retirement age and must be paid out 15 years past retirement age at the latest (Scandinavia, 2018).

Individual Pensions

For Danish citizens who are self-employed or who would like an additional supplemental plan, personal pension plans are a good choice. These plans have the same options as the private plans. Only about 15% of Danish citizens have such a plan (Scandinavia, 2018).

Taxation

Danish laws stipulate that contributions to certain types of annuities are tax-deductible up to a limit of EUR 6,836 a year. The limit is raised to EUR 7,431 if the employer pays the maximum contribution. Annuity certain contracts and temporary life annuities fall under this category. Life annuities, however, are fully tax-deductible and have no yearly contribution limits. Old-age savings accounts are tax free when withdrawn but are funded using post-tax dollars. All other pension income is taxed as ordinary income when paid. Each type of pension is taxed in a certain way. If pension income exceeds EUR 59,353 per year, the excess income will be taxed at 52%. Income at or below EUR 59,353 will be taxed at approximately 37.5%. The tax rate for endowment pensions is 40%. An additional 2% "equalization tax" is paid on any pension income exceeding EUR 49,615. Starting in 2015 the equalization tax started to decrease by 1% every year (starting at 6% in 2014) and will eventually reach 0% by 2020. All numbers are based on 2014 data (Scandinavia, 2018).

Faroe Islands

The Faroe Islands are a group of islands off the coast of Denmark near Iceland. It is an autonomous country of Denmark and adheres to a similar yet distinct state pension program. In the Faroe Islands, the public pension is available for everyone aged 67 and above. The pension consists of two main parts: a basic pension, and a pension supplement. Everyone who has lived in the Faroe Islands for at least 40 years between the ages of 15 and 67 is eligible for the full basic pension. A portion of the basic pension is payable to those at retirement age who have spent as little as three years in the country. The Faroe Islands pension supplement is payable in proportion to the pensioner's previous income as well as his/her marital status. The full supplement in 2014 was EUR 5,272 for those unmarried, and EUR 4,080 for the married per year. Both the basic pension and the supplemental pension are payable as long as the pensioner remains living (Scandinavia, 2018).

Solidary Labour Market Allowance

Along with the state pension, Faroese citizens are required to take part in the Solidary Labor Market Allowance. The same rules apply to the allowance as to the state pension. The allowance pays a monthly payment of EUR 394 (Scandinavia, 2018).

Compulsory Savings

At the start of 2014, the nation introduced a compulsory savings plan in conjunction with the state pension. The new law requires all citizens who are 21 and older to save 6% of all income for retirement. The required contribution amount will increase every year until 2028 when citizens will be required to save 15% of all income. Once the person retires, he/she can elect to take a portion as a lump sum (up to 15%) or allocate the funds to a life annuity.[2] The savings account must be placed in an insurance company located in the Faroe Islands. Recent changes have shifted tax from distributions to tax on contributions. Now all Faroese citizens pay a 40% tax upfront on all pension contributions with zero tax liability on benefits (Scandinavia, 2018).

Disability Pension

Faroe Island residents who have lived in the Danish Realm[3] for three years are eligible to receive a disability pension if their work capacity is decreased by at least half.[4] The recipient of the disability pension must have spent four-fifths of their time after age 15 in the Danish Realm for eligibility. If the time spent in the Danish Realm is under four-fifths, the pension is paid out in proportion to the time of residence. All Nordic citizens are eligible to receive the Faroe Islands disability pension. The disability pension will only be granted if there is no suitable work available and improving one's work capacity is not possible. There are provisions for three different levels of payout depending on the severity of the disability (Pension Rights, 2018).

[2] A minimum of 45% must be put into a life annuity. Also, a 55% limit exists on allocating funds to an annuity certain with a term of 10 years or more.

[3] This includes Denmark, the Faroe Islands and Greenland.

[4] Must be between ages 18 to 67. Foreign citizens who are married to a Danish citizen are also eligible.

United States Social Security

Components of U.S. Social Security

The United States Social Security system is comprised of two main programs, a supplemental retirement income program and a disability compensation program which also includes a survivor benefit (What is Social Security?, 2018). Medicare and Supplemental Security Income are two separately funded programs that are loosely tied to the Social Security Administration (SSA) (Understanding the Benefits, 2019). The official term for Social Security is the Old-Age Survivors Disability Insurance (OASDI) (Understanding the Benefits, 2019). The program was created in 1935 to boost economic security during the Great Depression by issuing benefits to the families of deceased workers (What is Social Security?, 2018). After many updates and revisions, the program now pays retirees a portion of their pre-retirement income based on the number of years they have worked, and compensates workers who have become temporarily or permanently disabled (What is Social Security?, 2018). According to the Social Security Administration, 20% of Americans currently receive Social Security benefits, totaling over 61 million beneficiaries (What is Social Security?, 2018). Out of those 61 million, one third are disabled, dependents or survivors (What is Social Security?, 2018). The program has been lauded as "the most successful anti-poverty program in our country's history" (What is Social Security?, 2018).

Work Credits

Work credits are described by the SSA as the "building blocks" of the entire social security system. The SSA uses accumulated credits to determine eligibility and benefit amounts. In 2017, A single credit would be awarded per $1,300 earned per year. If a person only earned $1,200 in a year, that person would not be issued a credit. Credits are based on when income is received, not on when the work was completed. For example, if a contractor finished contract work on December 25, 2018, but gets paid on January 5, 2019, the contractor would earn all four credits for the year 2019, if the amount paid exceeds $5,200. The maximum amount of credits an employee can earn in any single year is 4 credits (Work Credits).

Credits do not expire, meaning a worker can stop working for an extended period of time and resume working without having lost any previously earned credits. Social Security does not pay any benefits if the minimum number of credits have not been accumulated. Also, If OASDI taxes are not paid, no credits are issued. It is only by meeting the income requirement and by paying the appropriate OASDI taxes that a person be issued a Social Security credit (Work Credits).

Once a person retires, his/her Social Security benefits are based on average earnings over his/her entire career. A retiree needs 40 credits, in order to be eligible for benefits. Credits needed for disability benefits depend on the person's age when disability occurred as well as how many credits the person had accumulated up to that point (Work Credits).

Social Security Trust Funds

The entire U.S. Social Security program is financed through the OASDI taxes of current employees as well as two trust funds totaling over $2.8 trillion. Both trust fund accounts are managed by the U.S. Department of the Treasury. According to the SSA, the funds serve two purposes:

> They provide an accounting mechanism for tracking all income to and disbursements from the trust funds, and they hold the accumulated assets. These accumulated assets provide automatic spending authority to pay benefits (Social Security Trust Fund Data).

The smaller of the two funds is designated for the payment of disability benefits. This fund is called the Disability Insurance (DI) trust fund and has assets totaling around $71 billion. The DI trust fund only contains about 2.5% of all assets under Social Security. The larger fund is, unsurprisingly, called the Old-Age and Survivors Insurance (OASI) trust fund, which holds the remaining $2.8 trillion (Social Security Trust Fund Data).

Trust Fund Investments

The OASI and DI trust funds are required by law to be invested in federally guaranteed securities daily. All the funds' assets are invested in "special issues" of the United States Treasury. This particular type of security is the only type of security that the SSA invests in. The U.S. Treasury does not offer these securities to the public, offering them only to the Social Security Administration. Past investments have included public securities, but the administration has transitioned to solely owning "special issues" due to the unique characteristic that the SSA can redeem the "special issues" whenever needed at face value (Trust Fund FAQs). These "special issue" securities have been reported to earn an annualized 2.313 percent interest per month (Trust Fund FAQs). The rate is determined every month by a formula that was put into place in 1960 (Interest Rate Formula for Special Issues).[5]

Legitimacy of "Special Issue" Securities

"Special Issue" Securities are often criticized as an unsustainable investment due to the government's spending of all invested principle. Any interest that the investments accrue is also simply paid by the Treasury rather than by some outside investment source. The SSA, however, points out that the securities are not empty promises. The SSA claims that "special issue" bonds are just as safe as any treasury bond issued by the government and are "backed by the full faith and credit of the U.S. Government." The SSA is currently addressing alternative financing options, saying it is "likely" that legislation enacted in the future will restore the long-term solvency of the trust funds, implying that any large-scale redemptions of the "special issue" securities before maturity is unlikely (Trust Fund FAQs).

Sustainability

The sustainability of the U.S. Social Security program has drawn much criticism over recent years. The SSA recognizes the problem and every year publishes a Trustees Report, which clearly communicates the lack of program sustainability and urges our nation's lawmakers to enact legislation reversing the process. Every year, the Trustees Report calculates the longevity

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[5] "Special-issue securities bear a nominal rate of interest determined by a formula in the law. The current formula was established by the 1960 amendments to the Social Security Act. The formula sets the rate applicable in a given month to the average market yield on marketable interest-bearing securities of the Federal government which are not due or callable until after four years from the last business day of the prior month (the day when the rate is determined). The average yield must then be rounded to the nearest eighth of one percent. This formula became effective with the October 1960 rate." (Interest Rate Formula for Special Issues)

of the trust funds when operating at three different spending levels: "Low Cost," "Intermediate," and "High Cost." In the "Low Cost" scenario the trust fund will remain solvent for 75 years. The remaining "Intermediate" and "High Cost" estimates reveal the Funds will be depleted within 20 years. The SSA points out that even if the funds are depleted, the administration will still be able to pay out roughly 79 percent of all benefits due to continual OASDI revenue. This means that even if no legislation is introduced before the trust funds are depleted, three fourths of all benefits will still be paid out (Status of the Social Security and Medicare Programs).

Beyond the internal accounting and actuarial work that goes into analyzing and forecasting the longevity of the trust funds, there are external factors that also affect the sustainability of the funds. The annual Trustees Report looks at these external factors to determine future costs and revenue (Status of the Social Security and Medicare Programs).

Demographic Challenges

Because the United States Social Security Program uses a "pay-as-you-go" system, it is very sensitive to external factors like fluctuations in the working population, changes in life expectancy, and birth/mortality rates (Coping with the Demographic Challenge…). President George Bush recognized this problem. In his 2005 State of the Union Address, he said this:

> In today's world, people are living longer and, therefore, drawing benefits longer. And those benefits are scheduled to rise dramatically over the next few decades. And instead of sixteen workers paying in for every beneficiary, right now it's only about three workers. And over the next few decades that number will fall to just two workers per beneficiary. With each passing year, fewer workers are paying ever-higher benefits to an ever-larger number of retirees. (Coping with the Demographic Challenge…).

According to research from the Social Security Administration, fertility rates are dropping and life expectancy is increasing. Today, the population of people aged 65 and older comprises

12 percent of the population. By 2080, the forecasted percentage will be closer to 23 percent.[6] Coupled with this finding, the working-age demographic will decrease from 60 percent to 54 percent in that same time period.[3] It is because of these demographic changes that the worker-beneficiary ratio will fall from 3.3 in 2005 to 2.1 in 2040[7], soon after the SSA is forecasting exhaustion of the trust funds (Coping with the Demographic Challenge…).

On one hand, a rising average life expectancy is a wonderful development, but it introduces challenges ensuring the well-being of retirees later in life. Fertility and life expectancy have very different characteristics. Where fertility rates tend to swing back and forth,[8] life expectancy tends to increase steadily over time.[9] These two factors work together, along with many other smaller factors, to determine the worker-beneficiary ratio. Unfortunately for Social Security, both are moving in the direction that decreases this ratio (Coping with the Demographic Challenge…).

Immigration also factors into this equation. Because immigrants are younger and tend to have more children than average, the worker-beneficiary ratio would be even lower if it weren't for the influx of millions of immigrants every year (Coping with the Demographic Challenge…).

Alternative Policy Options

As mentioned previously, the Social Security Administration is not simply waiting for an impending collapse. The SSA works with governmental and nongovernmental agencies alike to

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[6] Figure 1.1 in Appendix - Population percentages

[7] Figure 1.2 in Appendix - Worker to beneficiary ratio

[8] Figure 1.3 in Appendix - Fertility rates

[9] Figure 1.4 in Appendix - Life expectancy

thoroughly research dozens of alternative policy solutions to correct the downward path of the program. These alternative policy recommendations can be separated into nine different policy categories. The nine categories are:

- Cost of Living Adjustment
- Level of Monthly Benefits (PIA)
- Retirement Age
- Benefits for Family Members
- Payroll Taxes (Including Maximum Taxable)
- Coverage of Employment/Earnings
- Investment of Marketable Securities
- Taxation of Benefits
- Individual Accounts.

All policy adjustments to Social Security will fall into one of these nine categories. Note that all of the categories, except the implementation of individual accounts, focus on improving the solvency of the trust funds (Individual Changes Modifying Social Security).

Cost of Living Adjustment

According to the Social Security Administration, a retiree's benefits are increased every year based on annual cost of living adjustments (COLA). The Social Security Administration does this to account for rising living expenses due to inflation. The SSA increases the benefit amount every year by applying a cost-of-living index called the Consumer Price Index (CPI). The SSA has used the CPI since 1972 when the SSA first started adjusting for cost of living. This original CPI index only measures the cost of living for about 32% of the US population, that 32% being wage earners and clerical workers. Since then, the Bureau of Labor Statistics has released multiple CPI indices (Provisions Affecting Cost of Living Adjustment).

The National Academy of Social Insurance recommends the SSA make the transition from the original CPI index (now called CPI-W) to an experimental CPI index called the CPI-E which measures the spending patterns of citizens aged 62 and above (Provisions Affecting Cost of Living Adjustment).

The Social Security Advisory Board argues that neither the CPI-W nor the CPI-E will properly measure the cost of living. The SSAB recommends using the *Chained* CPI-U (Provisions Affecting Cost of Living Adjustment). The C-CPI-U is considered a better measure of spending patterns (Consumer Price Index, 2018). The C-CPI-U trails the CPI-U by about 0.3 percentage points per year (Consumer Price Index, 2018). This means that in the 27 years after retiring, a retiree will see an 8.4% decrease in the purchasing power of his/her benefits relative to the SSA's decision to remain using the CPI-U (Provisions Affecting Cost of Living Adjustment). This has massive implications on the program's finances. It has been calculated that by changing the index from CPI-U to C-CPI-U, one fourth of the program's shortfall over the long term would be eliminated (Provisions Affecting Cost of Living Adjustment).

In terms of cost of living adjustment, policymakers are faced with two alternatives: decrease long term purchasing power of retirees in order to eliminate a portion of the deficit, or the alternative, leave the index at the higher rate, sacrificing possible cost-reductions in favor of higher retiree purchasing power.

Level of Monthly Benefits (PIA)

Current benefits are calculated on an incremental percentage rate similar to the federal tax system. As mentioned previously, the benefits paid to a retiree is referred to as the Primary Insurance Amount (PIA). The PIA is the sum of three different calculations based on a person's average earnings, indexed to a national wage index. The resulting number, called the Average Indexed Monthly Earnings (AIME), is then used in the final calculation of benefits. The first calculation involves setting aside 90% of the first $926 of a retiree's AIME. This process is repeated. For AIME amounts between $926 and $5,583 the SSA sets aside 32%. Finally 15% of all earnings above this point are also added into the equation to total a retiree's monthly benefits. The dollar amounts in this benefit formula are called "Bend Points" and increase every year. The example above would be an example of a retiree's benefits issued in 2019 (Primary Insurance Amount).

There are seven functions that can be changed for the purpose of improving solvency.[10]

B1: Bend Point changes, adjusting for inflation
B2: Bend Point changes, adjusting for longevity
B3: Bend Point changes, and other adjustments
B4: Computation year changes
B5: Minimum benefit changes
B6: Benefit Increases for older beneficiaries
B7: Other Benefit Adjustments
(Provisions Affecting Level of Monthly Benefits)

The adjustment of monthly benefits (PIA) has the potential for wide ranging effects, with dozens of implications to different parties depending on the policy change.

Retirement Age

Some policymakers suggest a systematic increase of the official retirement age over time. There are multiple dates recognized by the Social Security Administration in order to calculate

[10] The SSA categorizes each policy proposal by using an alphanumeric system depending on the topic discussed. This same system will be used in this paper for referencing purposes.

retirement benefits. Normal Retirement Age (NRA) and Early Eligibility Age (EEA) are the two that are often focused on by policymakers (Provisions Affecting Retirement Age).

The Social Security Advisory Board further classifies all proposals into two subcategories:

C1: NRA changes only,

C2: EEA changes with or without NRA changes.

(Provisions Affecting Retirement Age)

One proposal in the second category suggests increasing both the EEA (62) and NRA (67) by one month every two years. The changes would take effect in 2017 for the EEA and 2023 for the NRA. An additional proposal looks at changing just the NRA (67) at a rate of one month every two years indefinitely (Provisions Affecting Retirement Age).

Retirement age adjustments are relatively straightforward, and the parties affected are clear. For example, the solvency of the trust funds could be increased but this would come at the expense of increasing the time before retirees cross the eligibility threshold.

Benefits for Family Members

Current Social Security provisions allow for a spouse and/or a child to receive benefits in addition to retiree's personal benefits. If multiple dependents are eligible to receive benefits, the Social Security Administration caps the maximum benefits to 150-180% of the original retirement benefit (Benefits for Your Family).

The Social Security Administration has published seven provisions each affecting solvency in different ways. One proposal seeks to allow survivors of deceased wage-earners to claim a higher portion of their deceased spouse's benefit. The plan was proposed by two U.S. Senators, Mr. Begich and Mrs. Murray. They proposed that the widow(er) be able to claim the higher of either 75% of their own benefit plus deceased worker's benefit, or, the current law benefit. This would serve to increase the payout rate of the program thereby increasing its overall cost. The same two senators proposed another bill that would allow divorced spouses who were married for at least five years to receive benefits at a reduced rate, whereas the original number was 10 years. This would also increase program cost of the program (Benefits for Your Family).

A third proposal, made by the National Academy of Social Insurance, suggested lowering the spousal benefits benefit from 50% to 33%. Those most affected would be homemakers and spouses who have not worked and therefore are not eligible for retirement benefits themselves (Benefits for Your Family).

When it comes to trust fund solvency and the overall financial wellbeing of the program, lawmakers are faced with hard decisions that could severely impact the people who need social security the most. While cutting widows' benefits would undoubtedly improve solvency of the program, lawmakers have to balance the human factor in each and every decision.

Payroll Taxes (Including Maximum Taxable)

Current law caps the taxable OASDI portion of a worker's income at a certain level that increases every year based on an average wage index. The maximum taxable income for 2019 is \$132,900. These earnings are taxed at a total rate of 12.4%[11] (Contribution and Benefit Base, 2019). Increasing this tax rate, Changing the maximum, or eliminating the maximum altogether could have massive implications regarding the solvency of the trust funds (Provisions Affecting Payroll Taxes).

[11] Total paid between employer and employee.

For sake of organization, the SSA divides all proposals regarding payroll taxes into three categories:

E1: Increase the payroll tax, without changing the taxable maximum

E2: Tax all earnings above the current maximum

E3: Tax a portion of earnings above the current maximum

(Provisions Affecting Payroll Taxes)

A proposal falling into the E2 category calls for removing the taxable limit altogether. This would increase the solvency of the trust funds by 30 years. Another proposal suggests increasing the tax percentage in a two-step process, from 12.4% to 15.5% in 2031, and from 15.5% to 18.6% in 2061. This would ensure the solvency of the Social Security Program through 2095 and into the foreseeable future. (Detailed Single Year Tables).

Out of all the changes lawmakers could enact, payroll tax provisions and provisions regarding the taxable maximum make the largest impact on the solvency of social security by far. Most of the other provisions make such a small impact on overall solvency that many of those policies would need to be pulled into a comprehensive proposal to make a sizable impact. Payroll taxes, however, could increase solvency over 100 years by a simple percentage change of payroll tax. Analysis can be done to determine *who* would bear the burden of an increased tax, but it ultimately burdens someone. Policymakers must carefully navigate the consequences of increasing such a strain on the population.

Coverage of Employment/Earnings

Social Security supports a large percentage of all US citizens by covering different types of earnings, but it does not cover *all* professions and *all* earnings. Those who work for state or local governments are generally excluded from the program unless the state where the worker lives has passed "Section 218 Agreements." These agreements extend social security benefits to those who do not already have access to a supplemental retirement system like social security. The Social Security Advisory Board is suggesting the Social Security Administration include *all* newly hired workers for state and local government. These workers pay into the program and would receive benefits like a non-governmental employee would. This proposed plan of action would have negligible effects on the sustainability of the program while allowing workers who have previously been excluded the opportunity to join the program (How State and Local Government Employees are..., 2017).

In addition to increasing or decreasing coverage of certain employed individuals, policymakers have the ability to increase the coverage of OASDI taxes past payroll tax to other types of income like investment income and business income (Provisions Affecting Coverage of Employment Or Earnings).

Including or excluding small portions of America's citizens would have a negligible impact on the program. Introducing a tax on investment income would have a much larger impact. Again, policymakers must carefully analyze and vet any tax-increasing provisions.

Investment in Marketable Securities

Yet another way lawmakers have proposed to change the Social Security Program is by investing a portion of the total trust fund assets in marketable securities, as opposed to the "Special Issue" treasury securities the trust funds are investing in right now. There is precedent for this policy as was previously mentioned in this paper (Provisions Affecting Trust Fund...).

There are only a few possible variations within this policy area and all the proposed actions are negligible. Some have suggested that the trust funds should invest in securities that return the same 2.7% interest rate that the "Special Issue" securities return. This would have no actuarial effect on the trust funds. Another proposal is to invest in securities that garner a 6.2% return. Choosing a higher rate of return (accepting higher risk) would only increase the longevity of the trust funds by a single year (Provisions Affecting Trust Fund…).

Changes to the invested trust fund securities have a negligible impact on the long-term solvency of the trust funds, at least in isolation. Investing in non-treasury bonds decreases the ability of the Social Security Administration to call the bonds at face value.

Taxation of Benefits

Under law enacted in 1993, 85% of all current benefits are taxed for single taxpayers with over $34,000 retirement income per year and $44,000 for those filing jointly (Taxation of Social Security Benefits).

There have been multiple proposals with wide ranging effects regarding the taxation of social security benefits. Some suggest implementing a two-step marginal tax rate, while others suggest eliminating the taxation of benefits altogether (Provisions Affecting Taxation of Benefits).

Any changes to the taxation of benefits will result in negligible effects to the OASDI trust funds. The largest impact of these policy changes will be felt by taxpayers. In addition, some proposals contain provisions that state that not all taxpayers will be taxed at the same rate (Provisions Affecting Taxation of Benefits).

Individual Accounts

Implementing a personal account system would fundamentally alter the way the Social Security Administration is structured (Provisions Affecting Individual Accounts). Instead of a pay-as-you-go system, personal retirement accounts would be fully funded in advance. The Social Security Administration has identified four possible funding sources for any future individual accounts should policy makers decide to implement the strategy in the future (Provisions Affecting Individual Accounts).

The four sources are as follows:

- Personal and/or employer contributions
- A redirection of a portion of Social Security Payroll Tax being currently paid
- Transfers from the General Fund of the Treasury
- Some combination of any of the options above.

An aggressive individual account strategy might see all imminent retirees' personal accounts funded by the general treasury. Policy makers might or might not choose to fund young workers' accounts due to their being able to accumulate enough funds on their own over time (Provisions Affecting Individual Accounts).

The SSA has received multiple proposals that include the use of individual accounts (Provisions Affecting Individual Accounts). One of the proposals made by The Social Security Advisory Board recommends allowing workers to contribute an additional 2% of pay to an individual account. This would not have a direct impact on the long-term solvency of the trust funds, due to the fact that the funds would be located in a personal account. These accounts would serve to provide an additional savings account alongside the pay-as-you-go benefit system (Provisions Affecting Individual Accounts).

A full adoption of an individual account approach to retirement would change Social Security Program completely. Solvency of massive, nationwide trust funds would no longer remain an issue as each individual would have access to their own personal retirement trust fund. The Faroe

Islands have implemented individual accounts in addition to the nation's public pension system in order to ensure the well-being of its retirees.

Comprehensive Solvency Solutions

In addition to individual policy proposals that the Social Security Administration receives from governmental and nongovernmental agencies, the SSA also receives comprehensive social security solutions from policymakers. These comprehensive proposals have varying degrees of difference from the current program, and each plan makes individual policy changes in each of the nine categories. The Social Security Administration's actuaries work with the lawmakers to determine the financial effects of each proposal. In just the past four years, the SSA has received comprehensive proposals from many senators and high-ranking officials including Bernie Sanders, Marco Rubio, Elizabeth Warren, Tom Cotton, and Barack Obama. In the past 10 years, the SSA has run analyses on 95 different comprehensive social security reform proposals, calculated the financial effects of each policy decision, the effects on each individual, and on each trust fund (Proposals Affecting Trust Fund Solvency, 2019).

A comprehensive proposal submitted by Connecticut Representative John Larson, Connecticut Senator Richard Blumenthal, and Maryland Senator Chris Van Hollen in early 2019 was analyzed by the Social Security Administration and was found to have increased the solvency of the OASDI trust funds beyond the 75-year forecasting range and into the foreseeable future. The plan contains eight policy provisions, each one focusing on a different policy area (Goss, 2019).

Below are summaries of each of the planned policy changes:

Section 101: In terms of monthly Social Security benefits, increase first PIA calculation from 90% to 93% of the AIME's first bend point. To take effect Jan 2020.

Section 102: Use CPI-E (elderly index) instead of the CPI-W. Effective Dec. 2019 and later.

Section 103: Increase of the special minimum PIA to 125% of poverty level. The special minimum PIA is designed to keep lifetime low-earners from falling back into poverty.

Section 104: Replace current-law thresholds for federal income taxation of Social Security Benefits at $50,000 for those filing individually and $100,000 for those filing jointly.

Section 201 and **Section 202**: Apply combined OASDI tax rate on all covered earnings over $400,000

Section 203: Increase the combined OASDI payroll tax rate to 14.8%, 0.1 percentage point each year starting in 2020, reaching ultimate goal of 14.8% by 2043.

Section 204: Combine the OASI and DI trust funds into a single Social Security Trust Fund (Goss, 2019).

The Social Security Administration published a memorandum Jan. 2019 in response to this plan highlighting the financial effects on the program. Figure 1.5 in the Appendix depicts the solvency of the OASDI trust funds over the long term should the Proposal be implemented (Goss, 2019).

The Social Security Administration issued a memorandum in 2011 responding to another comprehensive proposal submitted by now retired Utah representative Jason Chaffetz which included eight provisions, one of which was a personal account provision. Chaffetz, who is now retired, included a provision that allowed for individual savings accounts for all working citizens. The provision allowed for a very conservative 2% savings into index funds in addition to OASDI taxes, with the option to disenroll. It is important to note that the individual retirement account provision would have negligible to no impact on the solvency of the OASDI trust funds. The combination of Mr. Chaffetz' other provisions, however, served to greatly increase the trust fund reserves over time, even more so than the prior comprehensive plan (Goss, 2011).[12,13]

Comparison Analysis

In the past decade, both the United States and the Faroe Islands have seen a growing need for Social Insurance reform. The major difference between the two is that Faroese lawmakers decided to act proactively instead of retroactively. By shifting their social insurance program to include personal accounts in 2014, young Faroese workers today do not need to worry about their retirement. By effectively saving 9% of all earned income[14] throughout their lifetime, these workers will ensure financial resources for themselves long after they exit the workforce. Not only will young workers be able to subsidize their retirement using their own savings, but they will be able to utilize the public pension system as well as the Solidary Labor Market Allowance.

It is important to note the vastly different demographic and political characteristics between the Faroe Islands and the United States of America. Whereas the United States has traditionally favored conservatism in a capitalist economy, the Faroe Islands and Denmark have adopted a more socialist leaning philosophy. This has helped tremendously in policymakers' success in implementing social reform and ability to impose higher taxes (Taxation).

The traditional American retirement has often been described as a three-legged stool, meaning retirees receive income from three different sources; namely, Social Security, employee

[12] Figure 1.6 in Appendix - Graph of Solvency

[13] Exhibit 2.1 in Appendix - Excerpt of eight provisions

[14] Retirement contributions equal 9% after a 40% tax is applied to the original 15% contribution.

pensions, and personal savings. Faroese citizens retire in similar fashion, also pulling from three different sources: the nation's public pension, the solidary labor market fund, and mandatory personal savings. Some Faroese workers might even receive a private pension as well. The introduction of mandatory personal savings accounts in the Faroe Islands has not fundamentally changed the way Faroese citizens retire but simply required personal savings by law.

Dan Mitchell, a traveling economist, travelled to the Faroes to speak on fiscal policy. He lauded the nation's decision to reform its current social insurance program due to the overwhelming evidence of an aging population and the resulting unsustainability of a 'pay-as-you-go' or 'tax-and-transfer' system. Mitchell pointed out that the United States has a large population called the baby boomers who are all about to retire. This is going to place strain on the tax-and-transfer system that the US is currently implementing. Mitchell claims that the deficit of the US social security system can be alleviated through the implementation of private, yet compulsory, retirement accounts funded by each individual (Mitchell, 2013).

Conclusion

The United States Social Security program is on a steep trajectory into a deep hole of deficits. The entire program would likely need significant changes if any meaning change is to take place. The future needs of the American people are at stake. Lawmakers have limited time to make these changes, considering Social Security Actuaries are pointing to the year 2034 as the date of OASDI Trust Fund depletion (Status of the Social Security and Medicare Programs). The Faroe Islands, on the other hand, have beautifully implemented Social Insurance reform along with many other nations around the world.

In review, the Nordic social insurance policies of the Faroe Islands were analyzed and used as a point of comparison with the United States Social Security system. The U.S. Social Security Administration was examined in detail and the cause of the OASDI trust fund depletion was thoroughly investigated. Faroese policies were compared with those of the United States, not overlooking the differences in demographic and political characteristics.

The Social Security Administration now has decades of social insurance reform data from nations around the world, as well as decades of research, statistics, forecasting, and actuarial analysis of the entire U.S. Social Security system. This may be the best time in the history of Social Security to finally take the leap.

Appendix

Figure 1.1- Population Percentages

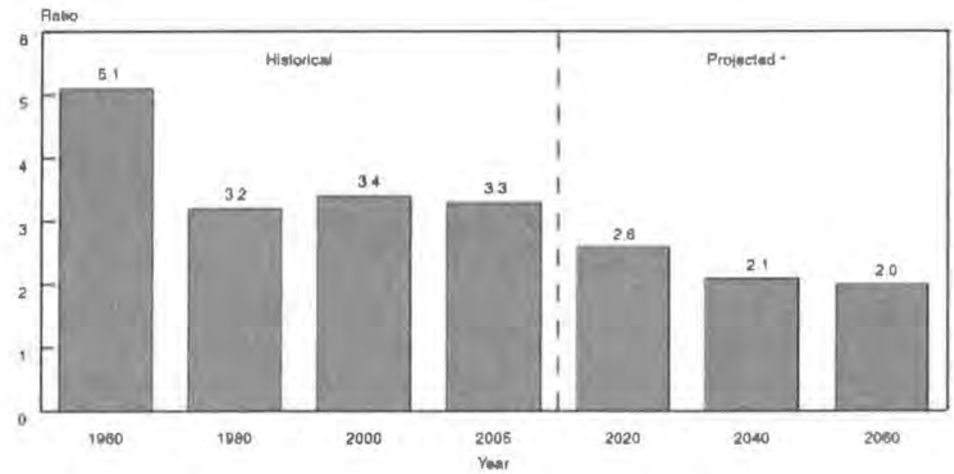
U.S. population, by age, selected years 1950–2080

Year	Population (thousands)				Percentage
	All ages	Under 20	20–64	65 or older	65 or older
			Historical		
1950	160,118	54,466	92,841	12,811	8
1970	214,765	80,684	113,158	20,923	10
1990	260,458	75,060	153,368	32,029	12
2005	302,323	83,963	181,457	36,902	12
			Projected [a]		
2020	339,269	87,547	198,213	53,510	16
2040	376,856	92,268	207,416	77,172	20
2060	402,079	96,760	218,777	86,543	22
2080	428,214	101,159	230,137	96,918	23

(Coping with the Demographic Challenge…)

Figure 1.2 - Worker-to-Beneficiary Ratio

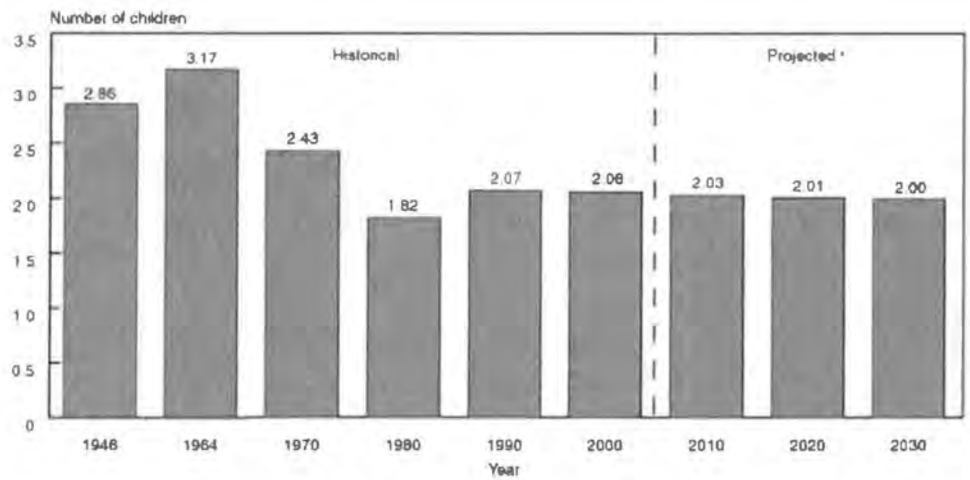
Worker-to-beneficiary ratio, selected years 1960–2060



(Coping with the Demographic Challenge…)

Figure 1.3 - Fertility Rates

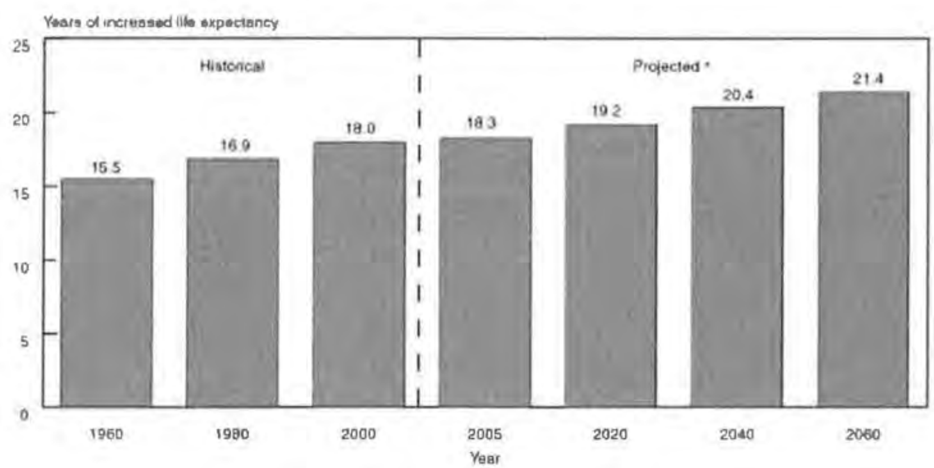
Fertility rates, selected years 1946–2030



(Coping with the Demographic Challenge…)

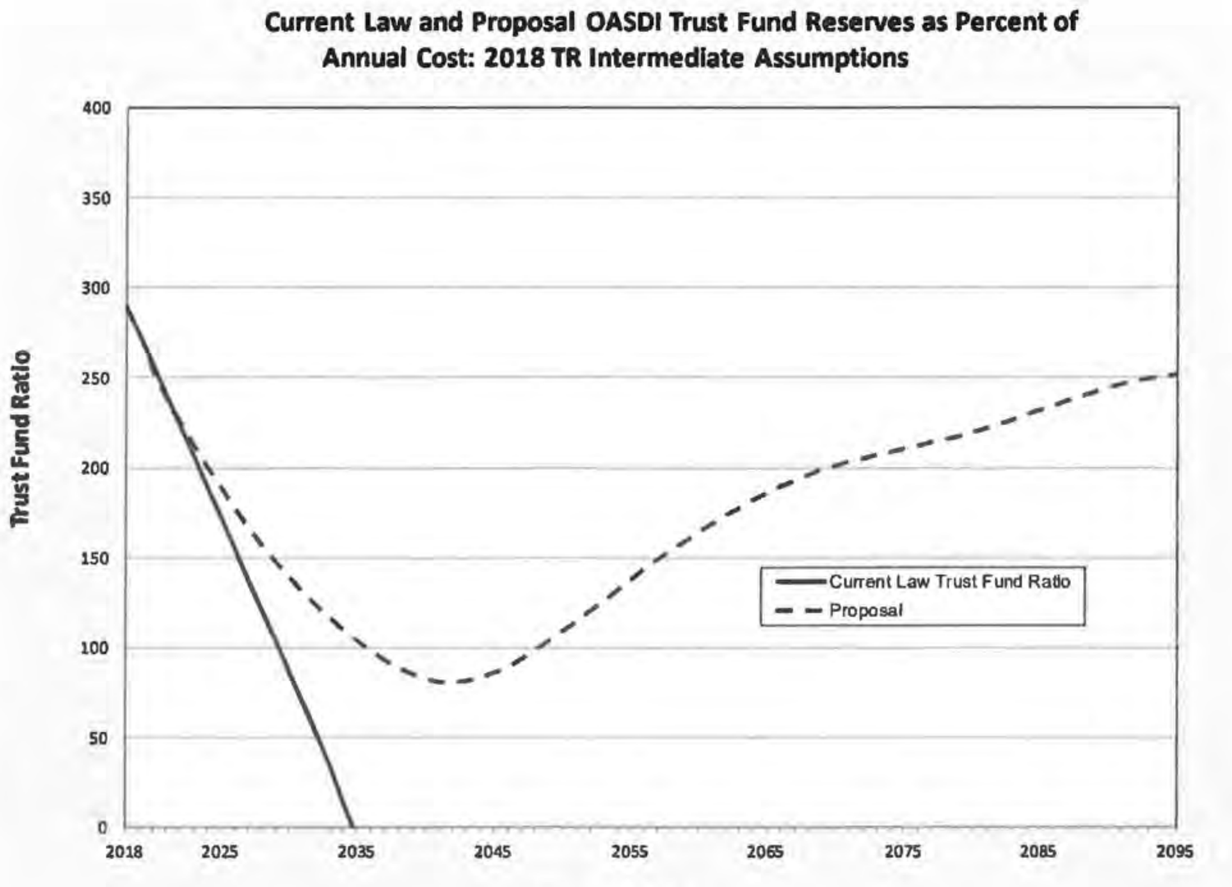
Figure 1.4 - Life Expectancy

Unisex cohort life expectancy at age 65, selected years 1960–2060



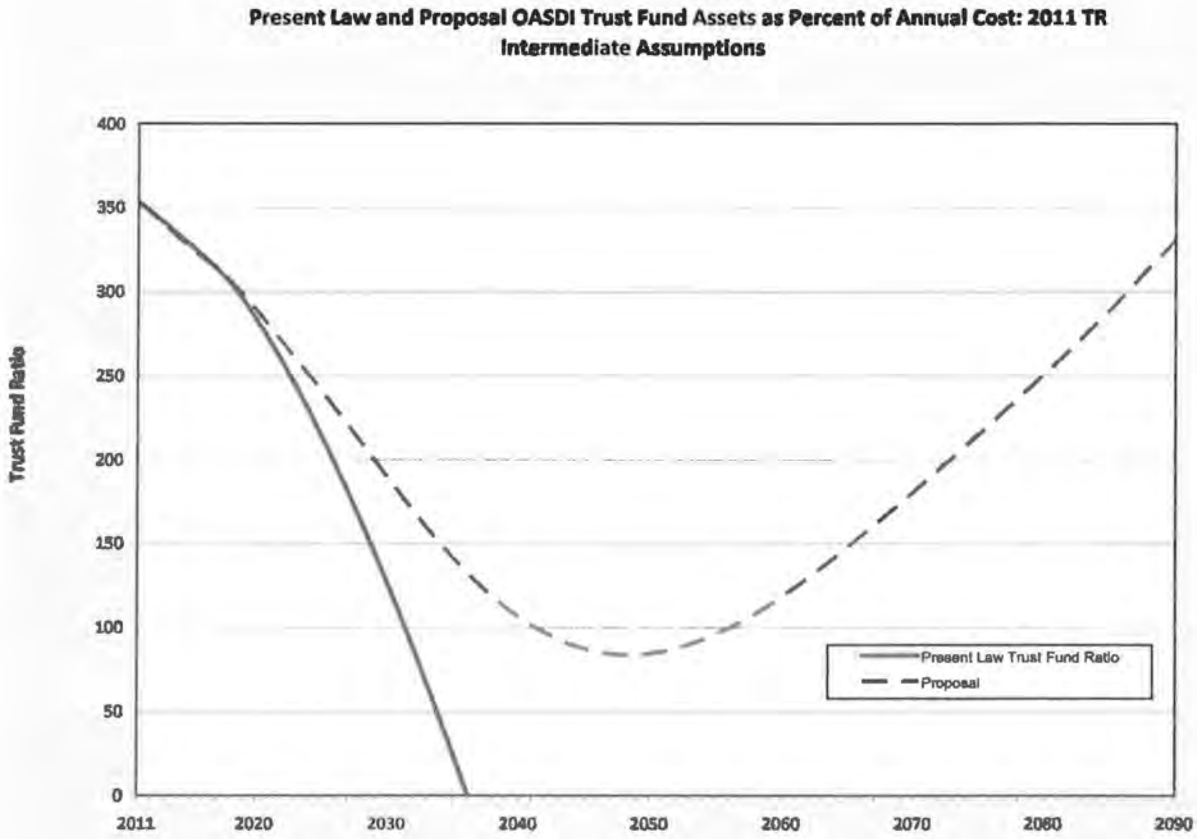
(Coping with the Demographic Challenge…)

Figure 1.5 - Proposal Solvency Forecast (2019)



(Goss, 2019)

Figure 1.6 - Proposal Solvency Forecast (2011)



(Goss, 2011)

Exhibit 2.1 - Excerpt of eight provisions (Summary)

1) After the normal retirement age (NRA) reaches 67 for those attaining age 62 in 2022, increase the NRA by two months per year until it reaches 69 for those attaining age 62 in 2034. Thereafter, increase the NRA by one month every two years. Allow retired workers reaching 62 in 2022 and later to earn delayed retirement credits during the first 36 months after attaining NRA. Retain the current-law earliest eligibility age at 62.
2) Starting with December 2015, compute the cost-of-living adjustment (COLA) using a chain-weighted version of the Consumer Price Index for Urban Wage Earners and Clerical Workers (C-CPI-W).
3) Establish progressive price indexing of PIA formula factors beginning with retired workers newly eligible for benefits in 2016 and stopping with retired workers newly eligible for benefits in 2055.
4) Increase the number of benefit computation years for retirees and survivors, adding one additional computation year for those becoming eligible in 2012, 2014, 2016, 2018, and 2020.
5) Replace the PIA with a special minimum amount, if higher, for workers who have at least 30 creditable years. A year is creditable if the worker earned four quarters of coverage. Phase in the percentage of this special minimum amount linearly, from 0 percent of the amount for those with 10 or fewer creditable years to 100 percent for those with 30 or more creditable years.
6) Provide a 5-percent increase to the benefit level of any beneficiary who is 85 or older at the beginning of 2012 or who reaches their 85th birthday after the beginning of 2012.
7) Reduce individual Social Security benefits if modified adjusted gross income (MAGI) is above $60,000 for single taxpayers or $120,000 for taxpayers filing jointly.
8) Separate personal accounts: Provide for default participation by all workers in a personal savings account, with the option to disenroll. Contributions equal to two percent of OASDI taxable earnings would be redirected from employee pay, but would not affect the payroll tax rate for the OASDI program.

(Goss, 2011)

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